

Fig. 2A

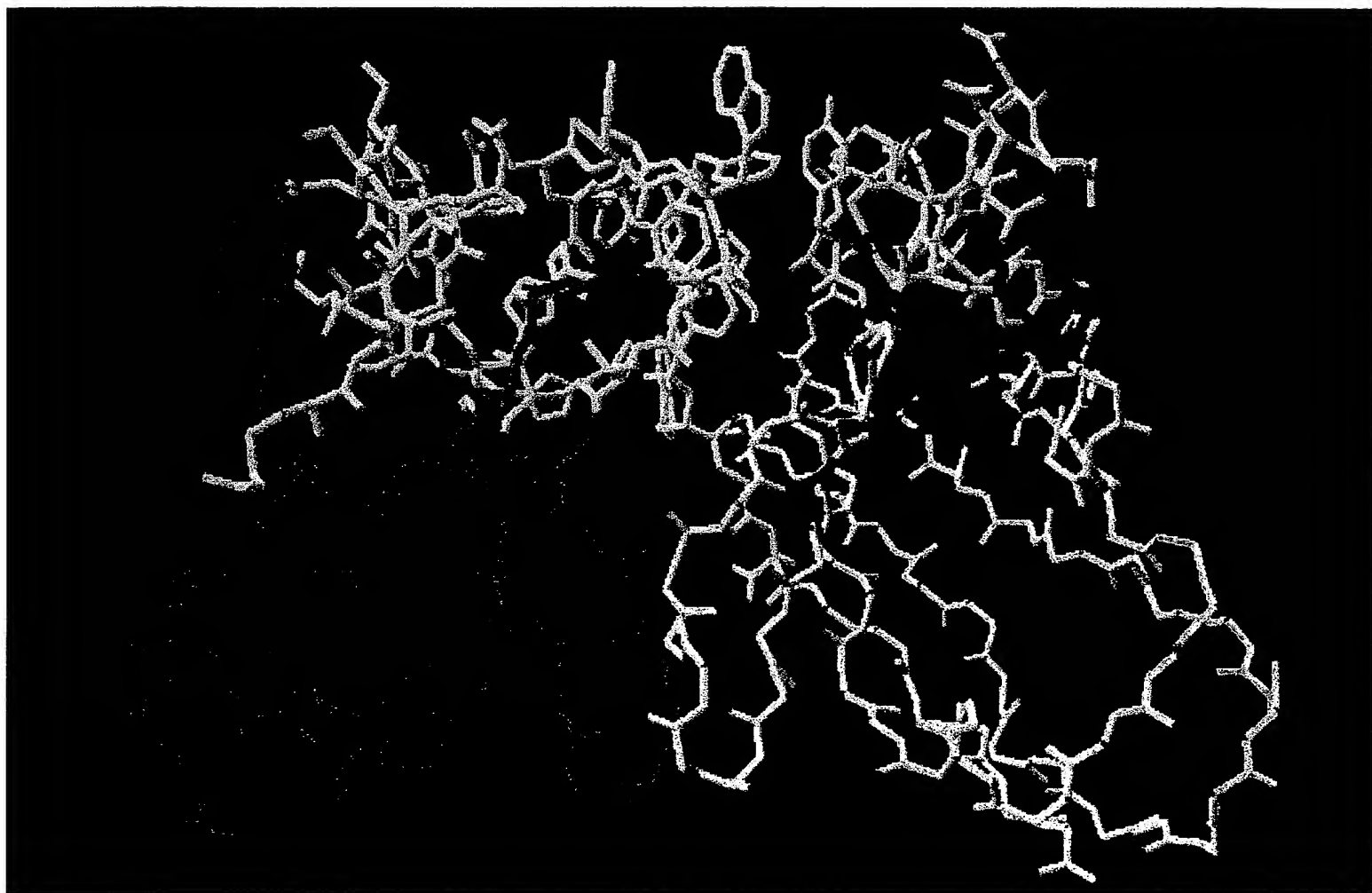


Fig. 2B

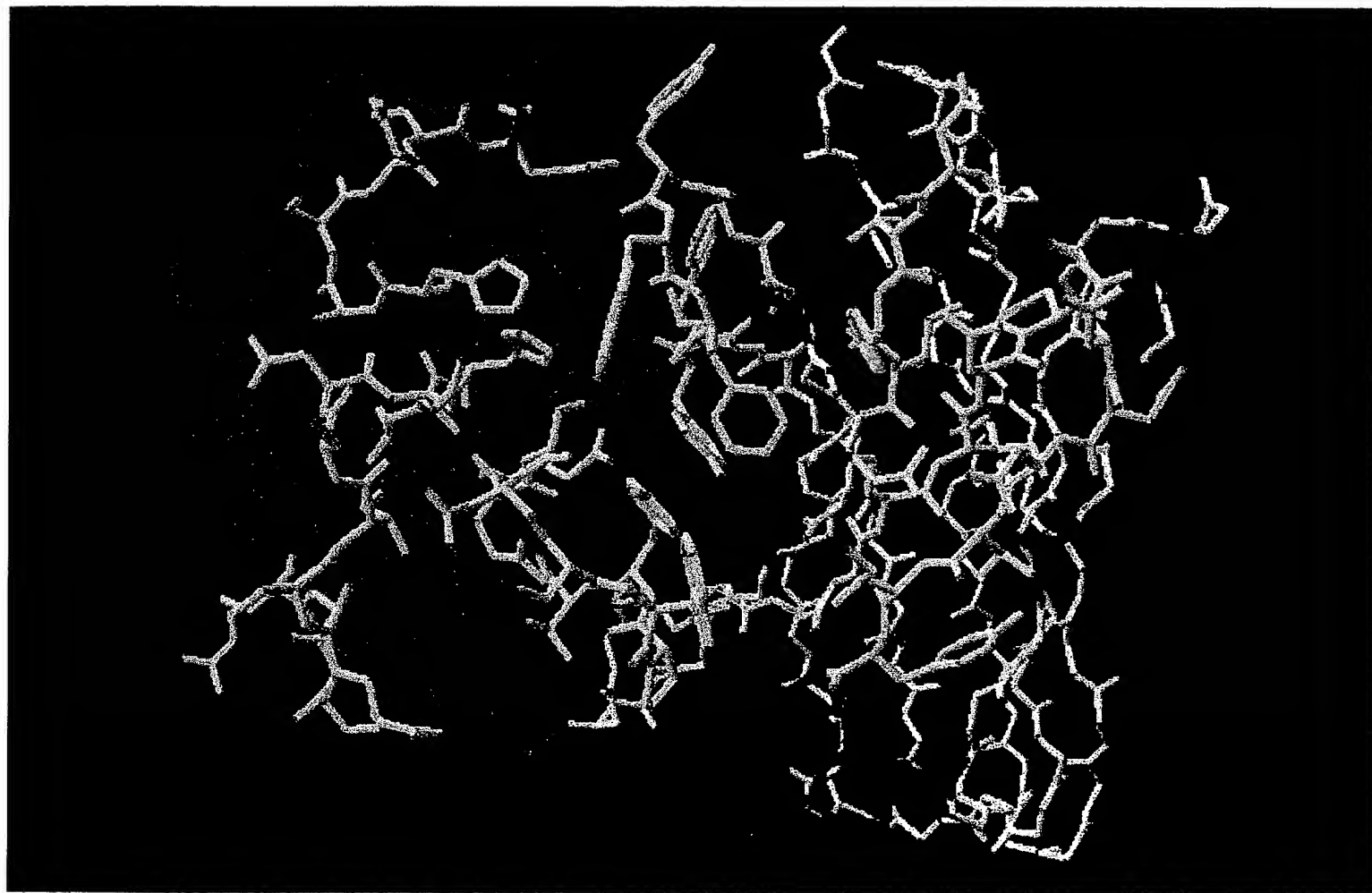
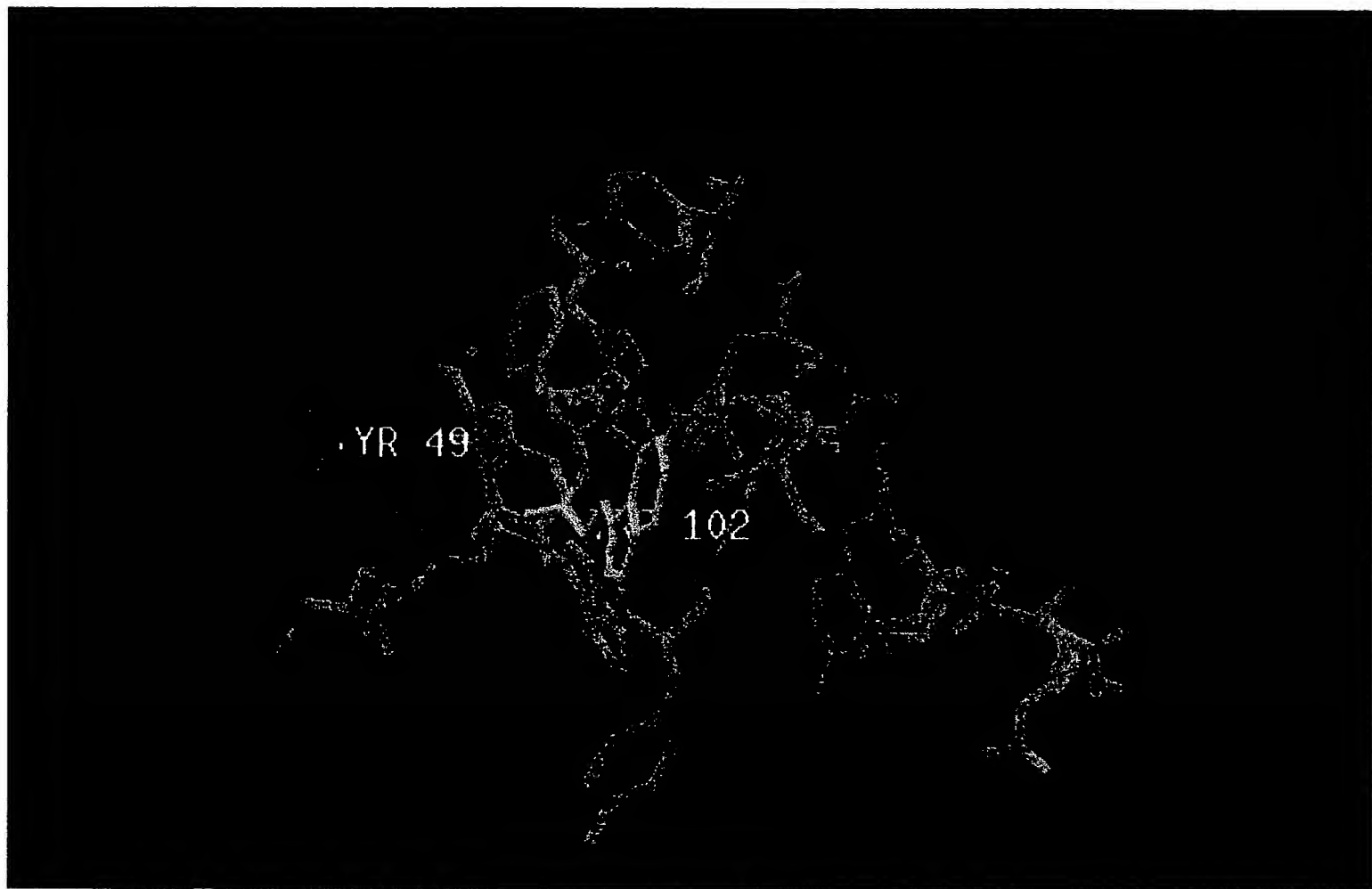


Fig. 2C



$$\begin{aligned} & \left\{ \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} \right\} u = f(x,y) \\ & u|_{x=0} = g(y), \quad u|_{y=0} = h(x) \\ & u|_{x=a} = G(y), \quad u|_{y=b} = H(x) \end{aligned}$$

1 11 21 31 41

Mouse1A6 EVQLQQSGAE LVKPGASLKL SCTASGFNIK **DTYIHWMKQR** PEQGLEW I GR  
\* \* \* \* \*

HumIII EVQLVESGGG LVQPGGSLRL SCAASGFNFS -----WVRQA PGKGLEWVA—

51 a 61 71 81 a bc 91

Mouse1A6 **IDPANDNTIYD PKVQGKATMT** ADTSS NTAYL **QLNSLTSED**TAVY YCTT  
\* \* \* \* \* \*

HumIII -----A **DSVKGRF** T IS RDDSKNTAYL QMNSLRAEDTAVY YCTT

103 111

Mouse1A6 **SGYWFA** YWGQGT<sup>103</sup>LV<sup>111</sup>T VSS

HumIII -----WGQGT<sup>103</sup>LV<sup>111</sup>T VSS

**V<sub>L</sub> Domain**

1 11 21 31 41 51

Mouse1A6 DIVLTQSPAT LSVTPGDSVS LSCRAS**Q**SIS NNLHWYQ**Q**KH SESPRLLIK**H** **ASQ**  
\* \* \* \* \*

HumkI DIQMTQSPSS LSASVGDRVT ITC----- WYQ**Q**KP GKAPKLLIY -- ----

61 71 81 91 101

Mouse1A6 **SISG** I PS RFSGSGSGTD FTL**S**IN**S**VET EDFGMFFC**Q****Q** **SNSW**PYTFGG **GT**KLEIKR  
\* \* \* \* \*

HumkI ----GVPS RFSGSGSGTD FTLT**S**ISLQ**P** EDFATYYC ---- FG**Q** **GT**KVEIKR

The CDR residues as defined by both Kabat and Chothia are shown in boldface.



**Figure 4. cDNA Sequences of Humanized scFv3 (Hum3) [SEQ ID. 2].**

The restriction sites are underlined. CCATGG NCO I SITE; GGATCC BAMH I SITE; GTTAAC HPA I SITE

CGAACCATGGGCGATATC**c**agatgACCCAATCTCCG**t**ctagcCTGAGC**g**ccAG  
Tg**t**tGGTgatCGAGTTaccattactTGCCGCGCCAGCCAATCTATCAGTAATAATCTTC  
ACTGGTATCAACAA**aa**accgggtaaagctCCG**aa**aCTTCTTATCAAACACGCCTCTCAG  
AGCATTAGCGGC**g**ttCCGAGCCGCTTCTCTGGCTCTGGCTCGGGC**a**CGGACTTT  
ACCCTTaccATCAGCTCT**t**ctcagccgGAAGAC**t**ttGCCaccTAT**t**atTGTCAGCAGTCTAA  
TAGCTGGCCGTATACCTTCGGT**c**aaGGTACCAAG**g**tcGAGATTAAGCGCGGCGG  
TGGCGGTTCTGGTGGC**g**gtgtagc**g**gtggcGGTGGATCCGGTGGCGGTGGCAGCGA  
AGTTCAACTTGT**T**GAGTCTGGTGGCGGTCTGGTTCAGCCGGGTGGCTCTCTGC  
GCCTGTCTTGCGCAGCAAGCGGTTTCAACATTAAGGACACCTACATCCATTGG  
atgAGGCAAGCTCCGGGTAAAGGTCTGGAGTGGGTGGCACGTATCGACCCGGC  
AAACGACAACACCATTTACGATCCGAAGGTGCAGGGCCGTTTTACT**a**tgTCTGC  
GGACacCTCTAAGAACACCGCGTACCTTCAGATGAACTCTCTGCGTGCCGAGG  
ACACCGCCGTCTACTACTGCACGACCTCTGGCTACTGGTTTGCCTACTGGGGC  
CAGGGCACGCTTGTCACCGTCTCTTCTGGT**t**Aa**CCC**

Figure 4

**Figure 5. Protection of HRV15 infection by mouse 1A6 scFv (Ms1) and humanized 1A6 scFv proteins (Hs3, 4, 7, 17, 18, 19 and 21).**

